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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,251	01/14/2002	Collin E. Thomas	TEXG:003USD1	6847

7590 06/07/2004
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EXAMINER

WEBER, JON P

ART UNIT	PAPER NUMBER
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1651

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/047,251

Applicant(s)

THOMAS ET AL.

Examiner

Jon P Weber, Ph.D.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20,21 and 25-51 is/are pending in the application.
- 4a) Of the above claim(s) 25,27 and 33-50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20,21,26,28-31 and 51 is/are rejected.
- 7) ☒ Claim(s) 32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20020313,20021003.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Status of the Claims

Claims 20,21 and 25-51 have been presented for examination.

Election/Restrictions

Applicant's election with traverse of Group I, Claims 20-21, 26, 28-32 and 51 in the Paper filed 03 May 2004 is acknowledged. The traversal is on the ground(s) that claim 20 is a generic linking claim and the different formulas for inhibitors are merely species.

This is not found persuasive because claim 20 is only linking in the sense that it broadly encompasses a conceptualization – decreasing drug resistance by inhibiting an ectophosphatase. This is not a proper linking claim because the target organism is only broadly specified and the nature of the inhibitor is not specified with any particularity. There is no common core compound suggested. One could just as easily write a “linking claim” as “organic compounds comprising sulfur that smell badly”. The formulas provided in claim 51 do not share any common structural feature within the usual meaning of a Markush group belonging as such to a number of different classes of molecule. If this application were filed under 371, the alleged special technical feature, *supra*, would not provide a contribution over the art in view of Pietkiewicz et al. (1998), Ujházy et al. (1996) and Ujházy et al. (1996), and, hence, there would be no unity of invention.

The species election within Group I to a) plant and b) *Pisum sativum* apyrase was not traversed.

The requirement is still deemed proper and is therefore made FINAL. Claims 25, 27 and 33-50 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to

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a nonelected inventions group, there being no allowable generic or linking claim. Claim 51 is considered only insofar as it reads on the elected group of Formula I. Applicant timely traversed the restriction (election) requirement in the Paper mailed 31 March 2004.

Specification

The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code at page 31. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code or revise it so that it is not a valid hyperlink (e.g., delete the "http://"). See MPEP § 608.01.

Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 20-21, 26 and 28-31 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13, 16, 27 and 30-31 of copending Application No. 09/949,268. Although the conflicting claims are not identical,

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they are not patentably distinct from each other because reducing drug resistance and increasing drug sensitivity are effectively the same thing; one cannot do one with effecting the other. The scope of drug resistant targets is different.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 51 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 51 includes formulas for non-elected groups which is confusing.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 20-21 and 31 rejected under 35 U.S.C. 102(b) as being anticipated by Pietkiewicz et al. (1998), Ujházy et al. (1996) and Ujházy et al. (1996).

Pietkiewicz et al. (1998), Ujházy et al. (1996) and Ujházy et al. (1996) disclose that administering the ecto-5'-nucleotidase inhibitor α,β -methylene-adenosine 5'-diphosphate reduced the drug resistance of several human and murine MDR tumor cell lines to doxorubicin.

Claims 20-21, 26 and 28-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Thomas et al. (US 6,448,472).

The applied reference has a common assignee and four of five inventors with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Thomas et al. (US 6,448,472) disclose that small molecule inhibitors of ectophosphatase can be used to reduce drug resistance (column 19, lines 42-54; column 20, line 18, and lines 54-58). In particular, the ectophosphatase studied was apyrase from *Pisum sativum*.

Allowable Subject Matter

Claim 32 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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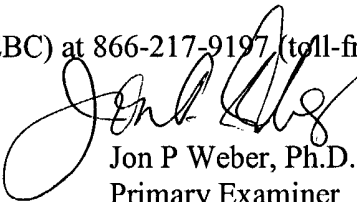
The following is a statement of reasons for the indication of allowable subject matter:

The compound of Formula I, is not known nor reasonably suggested to be used to inhibit ectophosphatase so as to decrease drug resistance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon P Weber, Ph.D. whose telephone number is 571-272-0925. The examiner can normally be reached on daily, off 1st Fri, 9/5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jon P Weber, Ph.D.
Primary Examiner
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JPW
3 June 2004